

## **Bryce Canyon National Park: Utah Prairie Dog Stewardship Plan Preliminary Alternatives**

*Alternative A: No Action (Continue Current Management):* Manage Utah prairie dogs using existing strategies and currently approved park plans and projects. Protect and study existing prairie dog colonies (Dave's Hollow, East Creek Meadow, Mixing Circle Junction, Mixing Circle, and others). Continue to use U.S. Fish and Wildlife Service (USFWS) programmatic agreements (hazard burrow filling in roadways, and snow removal and gravel / manure maintenance).

Use fire, vegetation and plague management actions to reduce nonnative plant species, hazard fuel accumulation, and disease incidence in prairie dog colonies. Continue ongoing monitoring, including an annual census, and for disease and mortality. Use interpretive programming, including staff training, occasional public and school programs and wayside exhibits to increase visitor appreciation for, and protection of colonies. Continue partnerships with the USFWS, Utah Prairie Dog Recovery Implementation Team, U.S. Forest Service (USFS), Utah Division of Wildlife Resources (UDWR), and universities. Continue to use the Bryce Canyon Natural History Association Adopt-a-Prairie-Dog program to enhance visitor appreciation and to generate donation funding for prairie dog management activities.

Modify park operations and work with concessioners to minimize impacts from administrative operations on Utah prairie dogs. Use a variety of traffic control devices, such as speed bumps, speed limit and prairie dog signs and other measures, implemented as needed to reduce impacts. Retain administrative and horse operations at the Mixing Circle.

*Alternative B: Improve Utah Prairie Dog Management in Connected Colonies:* Maintain and enhance existing park populations of prairie dogs by providing connectivity to other current or historic colonies and establish new populations in cooperation with partners. Protect historic and current Utah prairie dog habitat from management activities that may diminish habitat values. Use Mixing Circle surplus population to translocate prairie dogs to other suitable habitat in the park. Consider Fairyland and East Creek meadows for translocation in cooperation with partners (USFS, UDWR and Bryce Canyon City). Reestablish historic burrows at Fairyland using augering.

Prioritize vegetation treatments in colonies with connectivity outside the park (with a focus on Dave's Hollow, North Mixing Circle, Fairyland and East Creek meadows). Enhance vegetation in suitable habitat and existing Utah prairie dog colonies using manual, mechanical techniques and selective herbicide applications to treat nonnative plant species and seeding/planting. Strategies could also include periodic prescribed fire to reduce shrub and tree encroachment. Incorporate existing USFWS programmatic agreements into the stewardship plan and partner with neighboring land managers on vegetation management projects in suitable habitat.

Continue monitoring and interpretation / education as in Alternative A, but expand staff training opportunities and cooperation with partners to increase visitor appreciation of Utah prairie dogs. Make improvements to the Mixing Circle administrative / maintenance and horse operations area, including constructing new facilities and reallocating space for existing facilities. Add a physical barrier between the horse corrals and Mixing Circle. Relocate or fence the horse trail.

*Alternative C: Reduce Administrative Conflicts and Improve Utah Prairie Dog Habitat Quality in Select Colonies:* Optimize Utah prairie dog habitat quality to improve the beneficial effect prairie dogs have on other species and meadow ecological processes. Protect historic and currently suitable habitat located away from park facilities from management activities that may diminish habitat values. Allow translocation into the park from other colonies with high populations in the Paunsaugunt Recovery Unit. In addition to augering historic unoccupied burrows, use small-scale capped nest boxes in Fairyland and East Creek Meadow. Onsite staff or volunteers could be used to deter predators during reestablishment.

Use joint vegetation management projects with partners to avoid prairie dog colony expansion toward adjacent lands, where undesirable. Include more intensive vegetation management techniques, including thinning invading shrubs and trees and seeding or planting native species to increase diversity and to link currently unoccupied habitat, and to reduce nonnative plant species and to enhance native species in desirable locations. Incorporate existing programmatic agreements into the stewardship plan. Increase conservation measures to protect prairie dogs using early coordination with the USFWS, while continuing park operations in Utah prairie dog habitat. Include measures of habitat quality in monitoring activities.

Improve visitor appreciation of prairie dogs and provide new opportunities for visitor use with a new interpretive trail / boardwalk at Fairyland. Increase partnership engagement to expand opportunities for concessioners and university research, and more federal, state and local partners.

Decrease prairie dog dependence on horse operations and restore former meadow by relocating the Mixing Circle horse corrals. In the Mixing Circle maintenance area, include new and redesigned facilities and reallocated space (similar to Alternative B), but retain the current road alignment.

*Alternative D: Optimize Utah Prairie Dogs and Prairie Dog Habitat Quality:* Increase habitat quality and the number of Utah prairie dogs throughout the park in historic and suitable habitat. Improve active and historic colonies and protect historic and suitable habitat from management activities that may diminish habitat values. Use prairie dogs from outside the park and large-scale nest boxes for translocation into historically occupied meadows. Onsite staff or volunteers could monitor prairie dogs during reestablishment, deterring predators by their presence or hazing.

Optimize habitat and link prairie dog populations using vegetation management. Increase intensity of monitoring. Use educational and interpretive strategies similar to those in Alternative A, but include an emphasis on using school groups for translocation and habitat improvement projects. Expand partnerships with Bryce Canyon City, UDWR, the USFS and others, including translocation assistance to Paunsaugunt neighbors. Use university research to determine how to best maintain translocated prairie dogs and improve habitat quality. Modify USFWS programmatic agreements to include early coordination and conservation measures to protect prairie dogs.

Relocate the horse corrals south of the Mixing Circle to allow restoration of the Mixing Circle meadow. Use vegetation, rather than physical barriers to screen the maintenance / administrative operations area from the corrals along a relocated administrative roadway.

*Alternative E: Increase Interpretive and Educational Opportunities and Improve Utah Prairie Dog Habitat in Current and Historic Visible Utah Prairie Dog Colonies:* Link strategies to increase prairie dogs and improve habitat with enhanced interpretive and educational programs at current and historic colonies visible to the public. Protect habitat from management activities that may diminish habitat values. Translocate Paunsaugunt Recovery Unit prairie dogs and use small-scale nest boxes at easily observed colonies, where staff and volunteers could deter predators at night during reestablishment. Work with partners to avoid colony expansion where undesirable. Use USFWS programmatic agreements and early coordination to improve conservation measures.

Focus vegetation, fire management and habitat quality monitoring on meadows in visible colonies. Enhance interpretation and education using measures from Alternative C as well as wildlife observation cameras and spotting scopes and a bike tour to prairie dog colonies. Increase the number of walks, talks and interpretive materials, and outreach at public events. Expand partnerships with school districts and add new partnerships with organizations that conduct educational or interpretive programs. Use university research partnerships for research on prairie dog biology and habitat requirements.

As in Alternatives B-D, the Mixing Circle maintenance area would include new and redesigned facilities and reallocated space. Because the corrals would be retained, there would be vegetative barriers between the corrals and the road and other similar areas.